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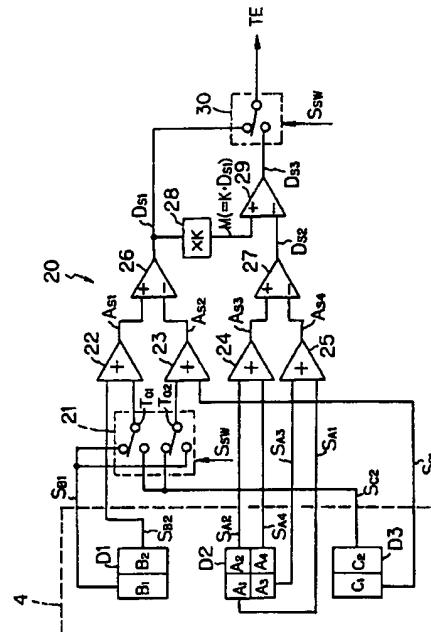
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## (54) Tracking error signal generation device

(57) A tracking error signal generation device (20) is used for an optical pickup (4) capable of reproducing and/or recording an information signal on a spiral or co-axial signal track of an optical disk (1) of one type among a plurality of optical disks of different types which track pitches are different from each other. The optical pickup has a light beam irradiation device for irradiating the optical disk with three light beams; and light detection devices (D1 to D3) for receiving a reflection light of each light beam. The tracking error signal generation device is provided with: a first operation device (26) for calculating a first tracking error signal according to the 3 beams method; a second operation device (26 to 29) for calculating a second tracking error signal according to the DPP (Differential Push Pull) method; and a switch (30) for selecting one of the first tracking error signal and the second tracking error signal on the basis of an instruction from the external.

FIG. 2





## EUROPEAN SEARCH REPORT

Application Number  
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| DOCUMENTS CONSIDERED TO BE RELEVANT   |  |                   | CLASSIFICATION OF THE APPLICATION (Int.Cl.6) |                 |                                  |          |        |                 |              |
|---|--|-------------------|--|-----------------|----------------------------------|----------|--------|-----------------|--------------|
| Category  | Citation of document with indication, where appropriate, of relevant passages  | Relevant to claim |  |                 |                                  |          |        |                 |              |
| A   | PATENT ABSTRACTS OF JAPAN<br>vol. 17, no. 696 (P-1664), 20 December 1993<br>& JP-A-05 234107 (SONY CORP), 10 September 1993,<br>* abstract * | 1,5               | G11B7/09                                     |                 |                                  |          |        |                 |              |
| A   | PATENT ABSTRACTS OF JAPAN<br>vol. 18, no. 315 (P-1755), 15 June 1994<br>& JP-A-06 068506 (SONY CORP), 11 March 1994,<br>* abstract *         | 1,5               |  |                 |                                  |          |        |                 |              |
| A   | US-A-5 136 567 (NAGAHARA SHINICHI ET AL.)<br>4 August 1992<br>* whole document *   | 5                 |  |                 |                                  |          |        |                 |              |
|   |  |                   | TECHNICAL FIELDS SEARCHED (Int.Cl.6)         |                 |                                  |          |        |                 |              |
|   |  |                   | G11B   |                 |                                  |          |        |                 |              |
| <p>The present search report has been drawn up for all claims</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 33%;">Place of search</td> <td style="width: 33%;">Date of completion of the search</td> <td style="width: 34%;">Examiner</td> </tr> <tr> <td>MUNICH</td> <td>28 October 1996</td> <td>Chaumeron, B</td> </tr> </table> <p>CATEGORY OF CITED DOCUMENTS</p> <p>X : particularly relevant if taken alone<br/>Y : particularly relevant if combined with another document of the same category<br/>A : technological background<br/>O : non-written disclosure<br/>P : intermediate document</p> <p>T : theory or principle underlying the invention<br/>E : earlier patent document, but published on, or after the filing date<br/>D : document cited in the application<br/>L : document cited for other reasons<br/>&amp; : member of the same patent family, corresponding document</p> |  |                   |  | Place of search | Date of completion of the search | Examiner | MUNICH | 28 October 1996 | Chaumeron, B |
| Place of search   | Date of completion of the search   | Examiner          |  |                 |                                  |          |        |                 |              |
| MUNICH  | 28 October 1996  | Chaumeron, B      |  |                 |                                  |          |        |                 |              |